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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,147	08/18/2003	Eric R. Jensen	2229/134	3306
2101	7590	11/29/2005		
BROMBERG & SUNSTEIN LLP 125 SUMMER STREET BOSTON, MA 02110-1618			EXAMINER NGUYEN, HOANG M	
			ART UNIT 3748	PAPER NUMBER

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/643,147	<b>Applicant(s)</b> JENSEN ET AL.	
	<b>Examiner</b> Hoang M. Nguyen	<b>Art Unit</b> 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11-04-05.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22,25-48 and 51-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22,25-48 and 51-56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>08-05-05</u> . | 6) <input type="checkbox"/> Other: _____  |

Applicant's amendment dated November 04, 2005, has been fully considered.

Applicant has amended the claims to include the "pressure regulator" and "external combustion engine" to overcome the previous rejection. However, another ground of rejection has been made using a reference already of record, US 4231222 to show a pressure regulator 23 being used in combination with a fuel pump 20 to supply fuel in an external combustion engine, e.g., Stirling engine.

Applicant has argued that it would not have been obvious to use different types of pumps. The Examiner disagrees. A person having ordinary skill in the art would have realized that different types of pumps could be used and/or replaced to produce different pumping powers if needed.

This Office Action has been made non-final.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-22, 25-48, 51-56, are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. 5293853 (Berger et al) in view of US 4231222 (Fenton). Berger discloses fuel pump control system for controlling the speed of the pump 105 for

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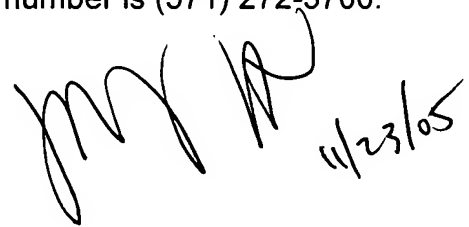
controlling the flow into a combustion chamber. A controller is in signal communication with said pump 105 and using a pump characteristics map 110 to provide the exact control to said pump. Note column 2, lines 47-52, a signal U is applied to fuel pump 105, and the fuel pump 105 meters the exact quantity QK1 to the internal combustion engine. Berger et al does not disclose a pressure regulator and an external combustion engine. US 4231222 (Fenton) is relied upon to show a pressure regulator 23 being used in combination with a fuel pump 20 to supply fuel in an external combustion engine, e.g., Stirling engine. It would have been obvious to provide a pressure regulator in the system of Berger et al as taught by Fenton for the purpose of regulating the pressure input and to utilize the system to drive a Stirling engine as taught by Fenton for the purpose of generating appropriate power output by said Stirling engine. Regarding claims 7-21, 22, 25-28, 30-48, 52-54, Berger et al discloses all the claimed subject matter as set forth above, but does not disclose different types of pumps, combustion engines (Stirling engine, gas turbine..etc..), signals, air/fuel ratio, filter..etc.... However, since it's well known in the art that different types of pumps, engines signals..etc.. can be used, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to elect different types of devices to be used with the fuel pump system in Berger et al for the purpose of achieving appropriate work output.

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Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Examiner Nguyen whose telephone number is (571) 272-4861. The examiner can normally be reached on Tuesday--Friday from 12:30 AM to 10:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion, can be reached on (571)-272-4859. The fax phone number for the Examiner is (703) 872-9306 for regular communication, and (703) 872-9303 for after final communication.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (571) 272-3700.

A handwritten signature in black ink, appearing to be 'H.M. Nguyen', followed by the date '11/23/05' written in a similar cursive style.

HOANG NGUYEN  
PRIMARY EXAMINER  
ART UNIT 3748

Hoang Minh Nguyen  
11/23/2005